

III.—New Plants from Sarawak.—By H. N. RIDLEY, C.M.G., M.A., F.R.S.

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The plants described below are partly from species collected in Sarawak by various collectors and preserved in the Singapore Herbarium, and some which have been introduced into cultivation.

*Ophiorrhiza axillaris*, n. sp.

Herbaceous or rather shrubby plants over a foot tall, usually branched stem hairy. Leaves ovate, to lanceolate narrowed at the base and oblique, apex acute, 2 to 5 inches  $\frac{1}{2}$ – $1\frac{1}{2}$  inch wide, thin glabrous above and beneath when adult younger leaves hairy with sprinkled hairs above, and midrib and nerves brown hairy, above green beneath pale, nerves 10 pairs brown, when dry. Stipules setaceous from a broad base. Cymes axillary or terminal short, solitary or several; peduncle in fruit  $\frac{1}{4}$  inch usually hairy, cymes three branched, each branch with 3 flowers, crowded. Flowers subsessile  $\frac{1}{8}$  inch long. Calyx tubular with acute lobes half as long as the corolla hairy or glabrescent. Corolla cylindric glabrous, lobes short blunt not recurved. Stamens very slender filiform. Fruit glabrous broadly triangular upper margin emarginate  $\frac{1}{4}$  inch across  $\frac{1}{8}$  inch deep.

Borneo, Sarawak, Matang (Hullett, Haviland 84, Ridley) at 2,000 ft. alt. Remarkable for its axillary inflorescence not secund, but simply cymose. It varies in size of leaf and amount of hairiness apparently according to habitat.

*O. Havilandii*, n. sp.

|| A herb or with somewhat woody stem, a foot tall, simple or with a few branches. Bark black when dry. Leaves lanceolate acuminate at both ends, occasionally ovate lanceolate, scabrid on both surfaces, especially on the midrib beneath, above fuscous, beneath when dry ochreous, nerves fine eleven pairs,  $3\frac{1}{2}$ –4 inches long 1 inch wide, petiole 1 inch. Stipules short with setae. Peduncles axillary or subterminal 1– $1\frac{1}{2}$  inch long.

Cymes half an inch long with short branches flowers on the terminal branches. Pedicel very short  $\frac{1}{20}$  inch. Calyx cupular with very short obscure teeth, hardly  $\frac{1}{16}$  inch long. Corolla tubular straight  $\frac{1}{8}$  inch long, lobes short ovate, spreading a little at length. Stamens included. Capsule fan-shaped, margin straight, side wings broad, cells small  $\frac{1}{8}$  inch across.

Borneo, Sarawak, Matang (Ridley 11758) Haviland (1709) Braang (Haviland 57 common).

Easily distinguished by its lanceolate leaves yellow beneath, long peduncle and small cyme.

*O. arenicola*, n. sp.

Stem woody 6 inches tall with long fibrous roots. Leaves lanceolate acuminate crowded, base shortly narrowed margins waved, rather fleshy above dark smooth with a few scattered thick trichomes, beneath yellowish with the nerves covered with close red hairs,  $2\frac{1}{2}$  inches long 1 inch wide, petiole  $\frac{1}{4}$  inch hairs. Stipules with several setae. Cymes short several compound in the upper axils hairy  $1\frac{1}{2}$  inch including peduncles. Pedicels short as long as the calyx, which is dilated with fairly long acute lobes all hairy. Corolla-tube cylindric  $\frac{1}{4}$  inch long glabrous, lobes short blunt. Capsule  $\frac{1}{4}$  inch across and half as wide deeply emarginate puberulous.

Sarawak, Puak (Ridley 12449) in sandy woods.

Allied to *O. reticulata* but with fleshier leaves, nerves and reticulations hardly visible, stem, petiole, and young parts covered with curled red hairs short compact inflorescence, and the flowers in cymes not secund racemes.

*O. reticulata*, n. sp.

Stem woody black 9–12 inches tall leafy towards the top. Leaves oblong ovate or lanceolate, base rounded or shortly cuneate, apex obtuse or subacute, above dark colored minutely pustular, beneath greyish white, nerves and reticulations conspicuous covered with red brown tomentum, nerves 10 pairs 3–5 inches long  $1\frac{1}{2}$ – $2\frac{1}{2}$  inches wide, petiole  $\frac{1}{2}$ – $\frac{3}{4}$  inch long covered with red brown tomentum. Stipules setiform. Peduncles axillary or

subterminal  $1\frac{1}{2}$ –3 inches long (in fruit) cyme branches short 3 or more lengthening to half an inch rather crowded. Flowers secund approximate rather numerous, all tomentose mealy. Pedicels very short as long as the calyx. Bracts none. Calyx  $\frac{1}{20}$  inch, dilate at base with short blunt lobes. Corolla barely  $\frac{1}{8}$  inch long tubular dilated at the top with short blunt lobes not spreading tomentose with short processes. Fruit nearly  $\frac{1}{4}$  inch across papillose, cells prolonged to apices, upper edge deeply emarginate; very broad V shaped.

Sarawak, Jambusan (Ridley 12364) and Bau (11756). Limestone rocks (Haviland 8495).

Very conspicuous from its pale elegantly reticulated underside to the leaf, crowded suberect cyme branches, and red brown tomentum, in some parts developing into small pointed papillae. Apparently confined to limestone rocks, for both the localities I got it were on the limestone.

*Psychotria elegans*, n. sp.

A graceful woody climber with a slender stem  $\frac{1}{10}$  inch through, light brown bark and internodes half an inch long. Leaves coriaceous glabrous  $1\frac{1}{2}$  inch long  $\frac{1}{2}$  inch wide, oblanceolate base long acuminate, apex shortly acuminate blunt, nerves almost invisible 4 pairs, petiole  $\frac{1}{4}$  inch long. Stipules annular  $\frac{1}{10}$  inch long with two pairs of minute points. Inflorescence a compound corymbose cyme an inch or more across, with three main branches on a peduncle an inch long. Flowers very numerous small sessile. Bracts minute ovate acute. Calyx obconic, with very short acute teeth. Corolla  $\frac{1}{8}$  inch long tube very short, lobes 5 short rounded at the tip as long as the tube. Stamens nearly as long as the lobes, with hairs between. Fruit (very young) obovate to pyriform terminated by the sepals. Pyrenes with 2 obscure ridges.

Borneo, Sarawak, on Matang at 900 feet elevation (Ridley 12294 Hewitt). Allied to *P. polycarpa* but much more slender with different leaves and smaller inflorescence.

*Bulbophyllum barrinum*, n. sp.

Pseudobulbs small conic half an inch long covered with fibres of sheaths as is the rhizome, half an inch



across, roots copious and dense. Leaf lanceolate thinly coriaceous subacute base cuneate narrowed to the petiole 6 inches long,  $\frac{3}{4}$  inch wide, petiole 3 inches long. Raceme 6 inches long erect slender. Flowers numerous distant. Bracts lanceolate acuminate caudate,  $\frac{1}{8}$  inch long as long as the ovary. Sepals lanceolate acuminate, the lateral ones gibbous saccate at the base  $\frac{1}{4}$  inch long. Petals lanceolate caudate minutely pustular half as long as the sepals. Lip shorter than sepals, lateral lobes semi-elliptic thin large, mid-lobe long linear fleshy pustular narrow. Column very small with a long foot; stelidia rather long acuminate subulate.

Borneo, Mt. Penrissen 3400 feet (Moulton).

This belongs to the affinity of *B. leptosepalum*, Lindl., and *B. montigenum*, Ridl., but differs chiefly in its curious lip with the long narrow midlobe.

*Eria (Eriura) melaleuca*, n. sp.

Stem a foot tall terete leafy. Leaves linear acuminate coriaceous 7 to 10 inches long  $\frac{1}{4}$  inch wide sheaths  $1\frac{1}{2}$  inch long. Racemes 2 terminal 4 inches long densely floriferous to the base. Bracts  $\frac{1}{10}$  inch long ovate acute persistent glabrous. Rachis woolly. Flower yellow  $\frac{1}{5}$  inch across, ovary and pedicel  $\frac{1}{5}$  inch long white woolly. Sepals lanceolate obtuse pubescent, mentum slightly gibbous very inconspicuous in flower. Petals much thinner lanceolate nearly as long narrow. Lip with a very short narrow claw, limb broad nearly orbicular in outline, three lobed, side lobes large elliptic obtuse, mid-lobe transversely oblong disc of lip fleshy elevated with two thickened nerves, broad and ending in a rounded point on the apex of the limb. Column short, foot long, anther large hemispheric.

Borneo, Sarawak, Maropok Mt. Lawas (J. C. Moulton, September, 1909).

Nearest to *E. major*, Ridl., but the lip is much shorter and broader, the terminal lobe specially wide and not clawed. When dried the blackened perianth contrasts strangely with the white woolly ovary giving the whole raceme an odd appearance.

*Eria Moultonii*, n. sp.

Stems tufted, pseudobulbs sub-cylindric  $1\frac{1}{2}$  inch long covered with broad sheaths lanceolate acuminate papery,  $\frac{1}{2}$  to nearly  $1\frac{1}{2}$  inch long. Leaves narrowly lanceolate

acuminate at both ends, acute 6 inches long  $\frac{1}{2}$  inch wide, thinly coriaceous or almost membranous, narrowed into the slender petiole 1 inch long. Scape lateral from the axil of a sheath slender 3 inches long with about six distant flowers, rachis white hairy. Bracts ovate acute glabrous keeled  $\frac{1}{8}$  inch long. Pedicel and ovary longer woolly hairy. Sepal upper lanceolate, laterals triangular broader sprinkled with hairs  $\frac{1}{4}$  inch long. mentum short and obtuse. Petals narrowly lanceolate acuminate glabrous. Lip fleshy pubescent, side lobes about half its length narrow obtuse, mid lobe tongue-shaped lanceolate obtuse base of lip broad, no calli. Column short half as long as its foot, which is channelled with an elongate triangular groove broadest at the lip base. Anther rather large, cells wide.

Borneo, Ulu Lawas, August 1909, J. C. Moulton.

Allied to *E. Maingai* J. Hook. fil, differing in its pubescent sepals, and fleshy tongue-shaped lip like that of a *Bulbophyllum*.

*Eria cymbidifolia*, n. sp.

Pseudobulbs none, a short stem about 2 inches long covered with the bases of the dead leaves. Leaves distichous linear 15-18 inches long  $\frac{1}{2}$ -1 inch across, apex acuminate, base jointed, joints about 3 inches. Raceme 5 inches long, peduncle terete 4 inches long. Flowers numerous crowded, glabrous white, buds tipped pink. Bracts very small lanceolate acuminate. Posticous sepal ovate oblong, laterals very much wider oblique subacute white tipped with pink outside. Mentum fairly long thick blunt. Petals shorter ovate spathulate. Lip oblong, base saccate, side lobes porrect free, apices triangular subacute, the lateral keels run the whole length of the side lobes horizontally, their edges meeting in the middle line and covering in the cymbiform lip which is full of nectar, the only access to which is a circular opening at the base of the lip; terminal lobe ovate acute. Column very straight fairly long, foot at base crimson and pubescent. Anther broad rounded not beaked. Pollinia 8 in. two masses each mass of two unequal pairs; clinandrium shallow with a median ridge.

Borneo, Pontianak (C. in H. B. Singapore 1893), Sumatra, Deli Baros (cult. 1910). A very curious plant

from its *Cymbidium*-like foliage, and absence of pseudobulb and the curious boat-like lip covered in with the keels lying horizontally.

*Platyclinis triloba*, n. sp.

Pseudobulbs approximate cylindric conic one inch long, covered with large lanceolate acute sheaths. Leaves lanceolate linear narrowed at both ends 10 inches long by  $\frac{1}{4}$  inch wide or smaller, narrowed gradually into the petiole which is hardly distinct. Raceme with the leaf very slender about 8 inches flowers very small rather distant. Bracts  $\frac{1}{12}$  inch long lanceolate acute. Flowers  $\frac{1}{8}$  inch across. Sepals lanceolate acute. Petals smaller. Lip 3-lobed base with two thick raised ridges or wings, limb 3-lobed broader than long, side lobes oblong rounded mid lobe narrow linear acute. A dark coloured spot at each side of the base of the side lobes. Column tall, stelidia from the base large linear obtuse, petaloid. Margin of clinandrium ovate longer than the anther.

Sarawak, Mt. Penrissen at 3,800 feet (Moulton).

Very distinct in the free stelidia and the curious broad lip.

*Acanthephippium Lycaste*, n. sp.

Pseudobulbs cylindric 2-6 inch long  $\frac{1}{2}$  inch through, joints green. Leaves 3, 20 inches long 4 inches wide including petiole broadly lanceolate plicate herbaceous 5 ribbed narrowed into the petiole, shining. Flowers in a raceme about 4 from base of pseudobulb, peduncle 3 inches stout covered with large green bract triangular lanceolate acute keeled 2-3 inches long. Peduncle stout one inch long white spotted purple, covered by its bract. Upper sepal lanceolate oblong obtuse fleshy  $1\frac{1}{4}$  inch long, laterals connate saccate with a spur blunt, ovate obtuse with spur 2 inches long. Petals narrower and shorter lanceolate obtuse all fleshy; outside white inside white with dark crimson lake spots. Lip claw adnate to sepals yellow spotted limb entire oblong rounded at the tip curved near the base, sides elevated rounded white fleshy margin with small crimson spots at tip, centre towards apex orange with spots and streaks of dark crimson, keels only one very low and obscure raised line in the centre. Column foot adnate to sepals white,



yellow at the base with 3 crimson slashes at base and one on each side below the stigma; free portion of column short and thick; anther conic white adnate by a process at the back of the clinandrium. Stigma very broad rounded heart-shaped; rostellum short, margins retuse.

Sarawak, Kuching, fl. H.B.S. June 1911.

This it appears quite different from *A. Curtisii*, Rchb. fil, "Gardener's Chronicle," 1881, page 169, as it has no side lobes and no ridges on the lip. *A. Curtisii* was obtained in either Sumatra or Borneo. Its lip resembles more that of a *Bulbophyllum* than that of an *Acanthephippium*. It was brought by the Head Gardener of the Singapore Botanical Gardens, B. K. Sahib. It is the prettiest of all the genus as far as I have seen them and reminds one of *Lycaste Skinneri* in colouring of the flower, but cannot be said to be as fine a plant as that old favourite.

*Agrostophyllum arundinaceum*, n. sp.

Stems a foot or more long  $\frac{3}{16}$  inch wide somewhat flattened. Leaves linear acuminate subcoriaceous acute 6 inches long  $\frac{1}{2}$  inch wide sheaths  $\frac{1}{2}$  inch long. Capitulum sessile pale half an inch through with 3 or 4 broad ovate truncate darker colored bracts at the back. Flowers 3 in short racemes covered with pale ovate oblong blunt bracts finely ribbed, the lowest empty  $\frac{1}{4}$  inch long. Flowers shorter than their broad oblong boat shaped bract  $\frac{1}{4}$  inch long. Pedicel thick half as long. Sepals ovate obtuse. Petals linear obtuse shorter and much narrower all apparently white. Lip as long as the petals fleshy dark colored apparently purple, entire, shoe-shaped, rounded at the tip and thick, sides thinner at base wrapping the column with a transverse ridge or lamina towards the base cutting off a sunken space as nectary. Column as long as the lip, dark colored. Anther large rather broad and low deeply emarginate at the back. Pollinia large elliptic. Clinandrium deep with a high dorsal point. Stigma large and wide with a prominent V-shaped lower margin. Base of column below the stigma very short.

Borneo, Mt. Poe at 2,000 feet alt. on a rock, Oct. 1909 (C. J. Brookes 5).

A very curious plant with its short racemes of glumaceous bracts, concealing the small flowers. The lip is quite spurless, having only a continuation of the

central depression cut off by a transverse lamina. The large stigma with its elevated V-shaped lower margin is peculiar.

*Saccolabium odoratissimum*, n. sp.

Stems pendulous 2 feet or more long often purple. Leaves fleshy lanceolate acute, base rounded  $2\frac{1}{2}$  inches long  $\frac{1}{2}$  inch wide, sheaths half an inch long ribbed when dry. Flowers in 1 or 2 short peduncles just above the axils, peduncles bearing 1-3 flowers. Bracts very short triangular lanceolate. Pedicels  $\frac{1}{4}$  inch long. Sepals and petals subsimilar-obovate spathulate tips rounded, yellowish blotched with light red  $\frac{1}{5}$  inch long. Lip base with two broad lobes oblong meeting in the mid-line at their apex, tips excurved, mid lobe ovate acute pure white with violet central spots in a depression at the base. Spur horizontal short half as long as the pedicel, dilated at the apex, and rounded; median callus between the side lobes an elevated ridge ocreous covered with pubescence; spur-callus linear bifid short yellow ocre, and pubescent at tip. Column white. Stelidia erect broad, obtuse. Anther ovate beaked. Pollinia globose bilobed pedicel long linear spathulate, disc oblong ovoid.

Borneo, ———, Mrs. Dare's Garden, fl. October 1909. Brought by Mr. Dare from Borneo some years ago. Exact locality not known.

*Habenaria elatius*, n. sp.

A tall plant 2 feet high with stout woolly roots and eight leaves. Leaves on a stem four inches long oblanceolate acuminate acute gradually narrowed to the base with a prominent keel, flaccid when dry 8 to 10 inches long, 2 inches across in the widest part which is towards the tip. Raceme nearly 2 feet long, base nude with about 30 distant green flowers. Lowest bracts lanceolate acuminate caudate  $\frac{3}{4}$  inch long, uppermost ovate acuminate  $\frac{1}{4}$  inch long. Pedicel and ovary 1 inch long. Sepals upper one ovate cymbiform adnate to the petals keeled with a strong nerve running up each side at the junction with the petals; lower sepals oblong falcate obtuse narrowed slightly towards the base  $\frac{1}{4}$  inch long. Lip short  $\frac{1}{8}$  inch long, trifid, base narrow linear limb rhomboid ovate with a short cylindric filiform tail on each side and a longer terminal one. Spur half an inch long cylindric slender curved slightly



and slightly dilate towards the tip. Column short, anther subhorizontal, with long slender processes linear lanceolate acute. Pedicel of pollinia very long slender.

Borneo, Sarawak, Bungo Range (November 1909) (C. J. Brookes 44).

*Dracaena Hewittii*, n. sp.

A shrub? Leaves elliptic lanceolate narrowed slightly to each end apex acute base narrowed into a flat petiole, 7 inches long by 2 inches across, petiole  $\frac{1}{2}$  inch, sheaths about  $\frac{1}{4}$  inch long. Panicle erect terminal about 9 inches long, with two short  $\frac{1}{2}$  inch branches at the base. Bracts ovate cuspidate, lowest one  $\frac{1}{4}$  inch long. Flowers slightly pedicelled in very short branches  $\frac{1}{4}$  inch long 3 or 4 together, in the axils of small ovate apparently red bracts. Flower  $\frac{2}{5}$  inch long apparently white. Perianth lobes linear free nearly to the base. Stamens as long as petals, anthers linear obtuse. Style fairly stout. Stigma trilobed rounded. Fruit rather small as big as that of *D. Porteri* 1-2 seeded.

Sarawak, Baram (Hewitt).

